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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/802,924	03/12/2001	Fu-Sheng Chen	06484.0070	1250

22852 7590 08/09/2004

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EXAMINER

NGUYEN, DANNY

ART UNIT PAPER NUMBER

2836

DATE MAILED: 08/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/802,924

Applicant(s)

CHEN, FU-SHENG

Examiner

Danny Nguyen

Art Unit

2836

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-9 and 17-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-9 and 17-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

***Response to Arguments***

1. Applicant's arguments, see Remark filed 07/06/2004, with respect to claims 1 and 17 have been fully considered and are persuasive. The final rejections of 1, 3-9 and 17-19 have been withdrawn.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3-6, 9, 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tepman (USPN 5,951,775) in view of Sumnitsch (USPN 6,056,825).

Regarding to claims 1, 5, 17, 18, Tepman discloses a chuck system for supporting a semiconductor wafer (see fig. 1 and 2) comprises a chuck platform (16) for supporting the semiconductor wafer, lift structure (see fig. 2) movably coupled to the platform to receive the wafer (14), including a lift base (shown in fig. 2) and at least one lift pin (30) removably coupled to the base, the lift pin having two ends with a first end removably coupled to the base and the second end coupled for supporting the wafer during operation of the lift structure, wherein the first lift pin is threaded. Tepman does not disclose the lift base has a thread hole. Sumnitsch discloses a semiconductor processing apparatus having a lift base (14) with a thread hole (32) for lift pins (fig. 2, col. 3, lines 19-27). It would have been obvious to one of ordinary skill in the art at the

time the invention was made to incorporate the threaded hole as disclosed by Sumnitsch into the lift base of Tepman in order to engage the lift pins without screws.

Regarding claim 3, Tepman discloses the system comprises a bolt (shown in fig. 2), wherein the first end of the lift pin (first pin 30) is threaded and the bolt removably couples the lift pin with the base through an opening provided by the lift base.

Regarding claims 4, 9, Tepman discloses the lift structure comprises a plurality of pins (30) coupled to the lift base and the lift base is flat and provides one opening for receiving the pins (30) (see fig. 2).

Regarding to claim 6, Tepman discloses the chuck system is an electrostatic chuck system (fig. 2).

Regarding to claim 19, Tepman discloses that the chuck system comprises a driving mechanism (driving mechanism 18) for driving the lift structure, the lift base having at least one mounting hole to mount the lift structure to the driving mechanism, wherein the mounting hole is positioned closer to the center of the lift base than the lift pin (shown in fig. 2).

3. Claims 7, 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tepman in view of Sumnitsch, and Morita et al. (USPN 5,815,366). Tepman and Sumnitsch disclose all limitations of claim 1 as discussed above, but do not disclose the lift pin connected to ground when the lift receives the wafer. Morita discloses a lift pin connected to ground (ground circuit 30 shown in fig. 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the circuit of Tepman and Sumnitsch to use a ground circuit connected to the lift pin as

taught by Morita in order to discharge electrostatic charges on the wafer during lifting operation, which would allow the wafer to be lifted easier since it will no longer be attracted to the chuck.


***Conclusion***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Danny Nguyen whose telephone number is (571)-272-2054. The examiner can normally be reached on Mon to Fri 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on (571)-272-2058. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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7/28/2004

  
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